

interface connection from the cellular carrier's switch to the reseller's switch; and (3) those switching functions that are necessary to recognize numbers that reside in the reseller's switch, route a call to the reseller's switch and set up a call from the reseller's switch to the cellular carrier's switch. The cellular carrier would, of course, provide a summary bill for these interconnection functions.

Unlike the local exchange carriers' unbundled services, cellular carriers' unbundled services are not be subject to tariffing. Consequently, it is essential that the Commission adopt these unbundled functions as "minimum requirements for negotiated interconnection arrangements."<sup>40</sup> Without explicit minimum regulatory requirements, particularly given the cellular industry's history of resistance to switch-based interconnection, the resellers will have great difficulty pursuing legal remedies against those cellular carriers who refuse to negotiate in good faith on technical interconnection and compensation matters.

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<sup>40</sup>Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services, Notice of Proposed Rulemaking and Notice of Inquiry, 9 FCC Rcd 5408, ¶¶ 5, 113 - 120 (1994).

#### IV. CONCLUSION

The Commission has an opportunity in this proceeding to establish ground rules for wireless competition that will produce consumer benefits almost immediately without imposing undue regulation. As TWT has shown, the public interest will be served if the Commission requires the still-dominant cellular carriers to interconnect with switch-based resellers according to the technically feasible and economically reasonable terms and conditions described in these Comments.

Respectfully submitted,

TIME WARNER TELECOMMUNICATIONS

A handwritten signature in dark ink, appearing to read "Richard Rubin", written over a horizontal line.

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27129

## DECLARATION OF ALEX D. FELKER

I, Alex D. Felker, do hereby declare and state under penalty of perjury as follows:

1. I am the Senior Vice President of Time Warner Telecommunications ("TWT") where I am responsible for technology planning, network engineering, information support systems, and new product development.

2. TWT currently offers wireless telephony service as a cellular reseller in Rochester, New York. TWT's commitment to wireless technology involves bringing consumers integrated offerings of innovative landline, wireless and content-based services at competitive prices. Switch-based resale is an integral component of this plan.

3. Technical representatives of TWT, in consultation with cellular radio licensees and equipment manufacturers, have achieved a substantial degree of consensus on a network structure under which TWT could establish a technically feasible switch-based cellular resale operation. TWT understands that other switch-based resellers have engaged their own consultations with similar results.

4. The technical and business arrangements associated with implementing switch-based resale are no more expensive or administratively burdensome to the cellular radio licensees than their interconnection arrangements with wireline carriers or their roaming agreements with each other. In fact, having gained extensive experience with wireline interconnection and roaming over the years, the cellular carriers would find interconnecting with resellers' switches to be relatively simple.

5. The system design currently under consideration (Figure 1) is based entirely on standardized interfaces, facilities and protocols. Under this architecture, telephony routing responsibility would be placed on TWT, mobility management on TWT's AIN platform, and wireless access services on the cellular carrier's local cellular network.

6. TWT would independently obtain blocks of NPA-NXX codes from the local numbering administrator and TWT subscribers' telephone numbers would reside on the TWT switch. In effect, the underlying carrier would treat this group of subscribers as a special class of "roamers" on its cellular network.

7. When in service within the underlying cellular carrier's home market, TWT subscribers would register their current local serving location with the AIN mobility management platform automatically (this platform is technically known as the subscriber's Home Location Register (HLR)).

8. The local serving underlying cellular carrier's mobile switching center ("MSC") would route all TWT subscriber outgoing calls directly to TWT's switch over dedicated facilities.

9. When in service in foreign (i.e., roaming) markets, TWT subscribers' registration information would be delivered automatically via an IS 41 (an industry standard protocol for intersystem operations and signaling) network to TWT's AIN mobility management platform.

10. All incoming calls intended for TWT subscribers would be routed to the appropriate TWT switch. Incoming calls then would be routed by the TWT switch depending on the current state of the subscriber.

11. Calls originated on a foreign network would be routed to the PSTN by the foreign underlying carrier using the existing industry roamer clearinghouse process.

12. Routing from the PSTN is based on a translation of the NPA-NXX to the appropriate switch. This information would be documented in a Local Exchange Routing Guide (LERG) which is published monthly by Bellcore.

13. For calls to subscribers that were both in service on the local cellular carrier's system and already registered with the AIN mobility management platform, in response to a query from the TWT switch, the AIN mobility management platform would verify the status of the subscriber and would return one of the following:

- (1) A Temporary Local Directory Number (TLDN) for the current serving system. The TLDN is used by the TWT switch to route the call to the appropriate switch and is used by the serving MSC to match the incoming call to the appropriate subscriber;
- (2) A call-forwarded-to-number (the call-forwarded-to-number is used for call forward -- immediate and Single Number Services);
- (3) Busy status;
- (4) No longer registered status; or
- (5) In those situations where paged subscribers do not answer (or the terminals do not respond to the page), the serving MSC would respond to the AIN mobility manager with the no answer condition. The AIN mobility manager would in turn return this information to the TWT switch, and either the incoming call would be redirected to the no answer

treatment (e.g., voice mail) or no action would be taken, in which case the serving switch would either time-out and give a no answer announcement or continues ringback.

14. For incoming calls to subscribers registered on a foreign roaming system, the above process generally would apply, but the call would be routed through the PSTN via the subscriber's Primary Interexchange Carrier (PIC) (the call is routed via the default carrier when no PIC is applicable). Billing information would be provided from foreign roaming carriers and interexchange carriers (if applicable).

15. For incoming calls to subscribers that are not registered, the TWT switch would route to either the call-forwarded-to number or provide no answer treatment (e.g., voice mail, continued ringback, or not answering message).

16. The call scenarios described above are limited solely to mobile subscribers. It is proposed, however, that provision be made to maintain subscriber records for TWT landline customers on the AIN platform, as well.

17. The configuration implications of the TWT plan include the following:

- For administration purposes, the subscribers appear in the TWT operational support environment
- TWT subscribers' phones are programmed with the home system identification (SID)
- The TWT customer service process interfaces to the TWT AIN mobility management platform for activation and profile management
- For routing purposes, TWT subscriber numbers appear on the TWT switch. The TWT switch routes directly to the appropriate location based on information for the AIN mobility management platform
- The various local serving MSCs interact directly with the AIN mobility management platform.
- The foreign roaming MSCs interact with the AIN mobility management platform in the same manner as they do for other cellular radio licensee's subscribers.

- The foreign roaming partner returns billing data to TWT via direct (intra-carrier) or clearinghouse (inter-carrier) processes.

18. The system as described would provide TWT with a number of important capabilities, including:

- Single number feature for all Time Warner local services (e.g., wireless and landline)
- Routing of all incoming and all local outgoing calls through the TWT switch, thereby
  - providing near-real time billing capability
  - taking advantage of unique interconnection arrangements between TWT and other carriers
  - minimizing forwarding to, busy, or no answered calls on the underlying carrier's network
- AIN functionality, including mobility management and other unique services which TWT may develop

19. I have read the foregoing "Comments Of Time Warner Telecommunications On Second Notice Of Proposed Rulemaking." With respect to statements made in the Comments, other than those of which official notice can be taken, the facts contained therein are true and correct to the best of my personal knowledge, information and belief.

14 June 1995  
Date

Alex D. Felker  
Alex D. Felker

# Figure 1 - Reseller Switch Network Design

